

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Manoj K. Bhattacharyya et al.

Examiner: H. Jey Tsai

Serial No.: 10/735,941

Group Art Unit: 2812

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

DECLARATION OF PRIOR INVENTION UNDER 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Declaration is submitted to establish prior invention of the subject matter of the present patent application. The person making this Declaration is the joint inventor, Anthony Peter Holden.

Accompanying this Declaration are Exhibits A through C to establish conception of the subject matter of the present patent application in the United States prior to the filing date of January 15, 2002, of U.S. Patent Application Pub. No. 2003/0132494 ("Tuttle et al.") coupled with due diligence from prior to the Tuttle et al. filing date to the April 18, 2002 filing date of the parent of the present patent application (i.e., constructive reduction to practice).

The present application (application no. 10/735,941, filed December 15, 2003, and assigned HP File No. 10014277-2) presents claims that were withdrawn from consideration in the parent application (application no. 10/125,095, filed April 18, 2002, and assigned HP File No. 10014277-1) as being directed to a non-elected invention.

Exhibit A (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Manoj Bhattacharyya, Darrel Bloomquist, and Anthony Holden and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014277 and describes subject matter of the present patent application.

Exhibit B (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Sarah Brandenberger, Darrel Bloomquist, and Manoj Bhattacharyya and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014284 and describes subject matter of the present patent.

Declaration under 37 C.F.R. § 1.131

Applicant: Manoj K. Bhattacharyya et al.

Serial No.: 10/735,941

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

application. The HP Patent Disclosure Nos. 10014277 (Exhibit A) and 10014284 (Exhibit B) were combined for purposes of preparation and filing of the patent application.


Exhibit C (8 pages, including attachments) is the Declaration of Matthew B. McNutt, the patent attorney assigned to prepare the parent of the present application, showing due diligence in preparation of the patent application from prior to the Tuttle et al. January 15, 2002, filing date to the April 18, 2002 filing date of the parent of the present patent application.

From these exhibits, it can be seen that the subject matter of the present patent application was conceived prior to the filing date of January 15, 2002 of U.S. Patent Application Pub. No. 2003/0132494, coupled with due diligence from prior to the filing date of the reference to the filing date of the parent of the present patent application (i.e., constructive reduction to practice).

As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Anthony Peter Holden Date: JULY 14 2005
Anthony Peter Holden

Write in Dark Ink on Front Side Only, Please

	PDNO <u>100/4277</u>	DATE RCVD <u>[REDACTED]</u>	ATTORNEY <u>[REDACTED]</u>
---	----------------------	-----------------------------	----------------------------

Descriptive Title of Invention:

Permalloy/soft mag. material coating/shielding to protect MRAM from stray

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [Mar 22, 01] He

(SARAH BRANDENBERGER has a almost identical. Please comb

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
267954	MANOJ BHATTACHARYA	<i>Manoj Bhattacharya</i>	1-857-7475	Paltoth 0419-20-8	5213
49084	Darrel Bloomquist	<i>Darrel Bloomquist</i>			

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
464700	ANTHONY HOLDEN	<i>Anthony Holden</i>			

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date: [

Full Name

Signature

Date of Signature

Steven C. Johnson

3

Description of Invention:

A. Description of the construction and operation of the invention (

A coating of soft magnetic material can be applied on top of outside plastic or other material. Coating

Multiple layers with different orientations easy axes to block fields of different orientation can also be added

~~Another~~ An alternate design/implementation can be making the packaging material out of magnetically soft plastic.

B. Advantages of the invention over what has been done before.

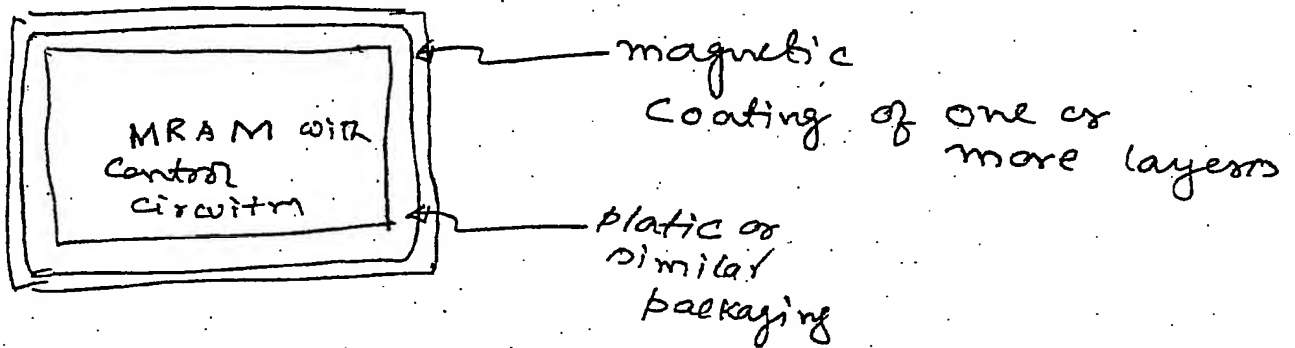
MRAM cells are switched by applying small (of the order of 50-100 Oe) magnetic fields generated by write conductors (word and bit lines). The magnetically written bits are thus sensitive to external fields. The ^{stray} magnetic fields can be earth magnetic field or any field coming out of a motor or even devices.

Write in Dark Ink on Front Side Only, Please

C. Problems solved by the invention.

D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

Pictures/Flowcharts (if any):



or

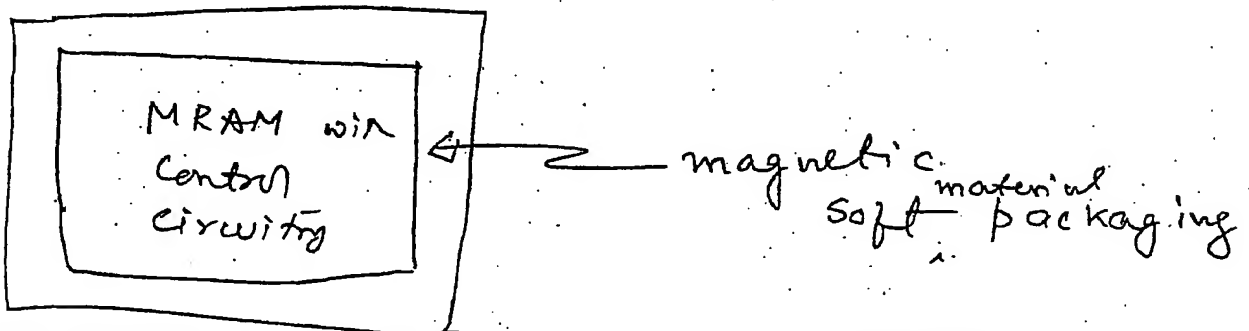


Exhibit B

Combin with 10014277
94

Write in Dark Ink on Front Side Only, Please



HP Invention Disclosure

PDNO

10014284

DATE RCVD

ATTORNEY

Descriptive Title of Invention:

Method of preventing external degradation of MRAM

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [3/21/01]

356135

SARAH Brandenberg

Signature

Telnet

Mailstop

Entity & Lab Name

49084

Darrel Bloomquist DBloomquist

267954

Manoj Bhattacharyya mabhattacharyya

Signature

Telnet

Mailstop

Entity & Lab Name

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date: []

Full Name

Steve C. Johnson

Signature

Date of Signature

Description of Invention:

A. Description of the construction and operation of the invention (

provide shielding similar to faraday cage or solid shield more shielded
This can either be on the chip or external packaging.

B. Advantages of the invention over what has been done before.

as far as I know - no shielding has been used on MRAM. This would ~~also~~ prevent outside fields from writing - The casing may also have the property of distributing temperature.

Write in Dark Ink on Front Side Only, Please

C. Problems solved by the invention.

prevents external fields "corrupting" Mram

D. Prior solutions and their disadvantages (If available, attach copies of product literature, technical articles, patents, etc.).

Don't know of prior solutions

Pictures/Flowcharts (if any):

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Manoj K. Bhattacharyya et al.	Examiner:	H. Jey Tsai
Serial No.:	10/735,941	Group Art Unit:	2812
Filed:	Dec. 15, 2003	Docket No.:	10014277-2
Title:	MAGNETIC SHIELDING FOR MRAM DEVICES		

DECLARATION OF MATTHEW B. MCNUTT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Declaration is submitted in support of Declarations of Prior Invention Under 37 C.F.R. 1.131 submitted by joint inventors of the above-referenced patent application. This Declaration is submitted to establish due diligence in the preparation and filing of the parent of the above-referenced patent application in the United States from prior to the filing date of January 15, 2002, of U.S. Patent Application Pub. No. 2003/0132494 ("Tuttle et al.") to the April 18, 2002 filing date of the parent of the above-referenced patent application (i.e., constructive reduction to practice).

I, Matthew B. McNutt, state as follows:

1. I am the patent attorney responsible for preparing the above-referenced patent application (serial no. 10/735,941, filed December 15, 2003, and assigned HP File No. 10014277-2), and also the parent of the above-referenced patent application (serial no. 10/125,095, filed April 18, 2002, and assigned HP File No. 10014277-1).
2. The above-referenced patent application (HP File No. 10014277-2) presents claims that were withdrawn from consideration in the parent patent application (HP File No. 10014277-1) as being directed to a non-elected invention.
3. I have been employed by the law firm of Dicke, Billig & Czaja since 2001.
4. I received invention disclosures (attached as Exhibit A and Exhibit B to the Declarations of Manoj Bhattacharyya, Anthony Holden, and Sarah Brandenberger) for purposes of preparing the parent of the above-referenced patent application on the subject invention of the invention disclosures on or around September 5, 2001 (*see* Exhibit 1, attached).

5. Upon receiving the invention disclosures, they were placed in line to be prepared.
6. During the period between approximately September 5, 2001 and January 15, 2002, the parent of the above-referenced patent application was one of a number of backlogged unrelated cases on which I worked reasonably hard during this period and carried out expeditiously. My practice at the time was to attend to the preparation of patent application cases having bar dates first. I attended to the remaining patent application cases (including the parent of the above-reference patent application) generally in the chronological order in which the patent application cases were received.
7. An invoice issued by Dicke, Billig & Czaja for professional services rendered in preparing the parent of the above-referenced application is attached as Exhibit 2. In the invoice, the initials "MBM" (for "Matthew B. McNutt") are my initials.
8. As indicated on the invoice, I conducted a telephone interview with the inventors to discuss the subject invention of the invention disclosures on January 16, 2002.
9. After I interviewed the inventors on January 16, 2002, and continuing until on or around January 31, 2002, I prepared the parent of the above-referenced patent application.
10. On February 4, 2004, patent attorney Steve Dicke of Dicke, Billig & Czaja emailed to HP Managing Attorney Steven R. Ormiston an inventor-approved draft of the parent of the above-referenced patent application (*see* Exhibit 3, attached).
11. On February 13, 2002, HP Managing Attorney Steven R. Ormiston emailed patent attorney Steve Dicke with comments on the parent of the above-referenced patent application (*see* Exhibit 3, attached).
12. Between February 13, 2002 and about April 1, 2002, I revised the patent application in view of the comments of HP Managing Attorney Steven R. Ormiston.

Declaration of Matthew B. McNutt

Applicant: Manoj K. Bhattacharyya et al.

Serial No.: 10/735,941

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

13. On April 2, 2002, a Declaration and Power of Attorney and Assignment documents for the parent of the above-referenced patent application were sent to HP Legal Assistant Chris Griffin for obtaining inventor signatures (*see* Exhibit 4, attached).

14. The declaration was executed by the inventors on or around, 2002 (*see* Exhibit 5, attached).

15. The parent of the above-referenced patent application was subsequently with the U.S. Patent and Trademark Office on April 18, 2002.

As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: _____


Matthew B. McNutt

Date: _____

7/13/05

DICKE, BILLIG & CZAJA, P.A.

Patent • Trademark • Copyright
ATTORNEYS

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

Jolene A. Neby
Direct Dial: (612) 573-0439

September 5, 2001

Mr. Matt McNutt
Dicke, Billig, & Czaja, P.A.
4210 Spicewood Springs Road
Suite 104
Austin, TX 78759

RE: New U.S. Patent Application for:
Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM From Stray Field
H-P File No.: 10014277-1
DBC File No.: H302.226.101

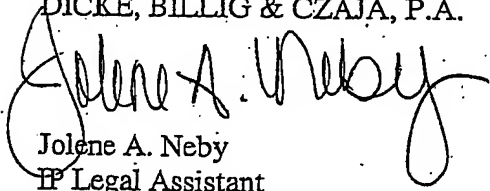
Hi Matt,

Please proceed with preparing a patent application based on the above-referenced file. You may contact the inventors directly for further information you will need in order to prepare this application. The HP primary technical contact is Manoj Bhattacharyya of Palo Alto, California, who can be reached at (650) 857-7475. This application does require a search and the preparation of EP claims and abstract.

If you have any questions regarding this matter or HP procedures, which we may want to touch base on, please contact Steve or me at (612) 573-0439.

Regards,

DICKE, BILLIG & CZAJA, P.A.



Jolene A. Neby
IP Legal Assistant

Enclosures

DICKE, BILLIG & CZAJA, PLLC**Patent • Trademark • Copyright
ATTORNEYS**Fifth Street Towers • 100 South Fifth Street • Suite 2250 • Minneapolis, Minnesota 55402
Telephone: (612) 573-2000 Facsimile: (612) 573-2005Hewlett-Packard Company
Financial Administrator - PMHP
Legal Dept. M/S 1068
HP Development Co, LP, PO Box 10301
Palo Alto CA 94303-0890
U.S.A.

Attn: Philip Lyren

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

Page: 1

01/31/2002

Account No: 303-216101M

Invoice No: 18109

Fees

Rate Hours

01/16/2002 MBM

Phone interview with inventor. Conduct
prior art search.

1.00

01/17/2002 MBM

Review prior art. Draft claims for
patent application.

2.80

01/18/2002 MBM

Prepare patent application.

3.80

01/21/2002 MBM

Prepare patent application.

3.90

01/22/2002 MBM

Prepare patent application.

6.50

01/29/2002 MBM

Amend patent application per inventors
comments.

7.80

01/30/2002 MBM

Amend patent application per inventors
comments. Draft additional claims.

6.10

2.10

01/31/2002 PAR

Paralegal services in preparation of
Assignment document; in preparation of
Declaration; in forwarding documents for
execution; in reviewing application and
drawings for accuracy; in preparation of
transmittal and calculation of fees; in
filing application and related documents
at U.S. Patent and Trademark Office; in
completion of client checklist; in
updating Request for Quote; in updating
docket dates; in updating CaseMaster re:
filing of documents; in reporting matter

Hewlett-Packard Company

Page: 2

01/31/2002

Account No: 303-216101M

Invoice No: 18109

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

		Rate	Hours
PAR	to client. Paralegal services in preparation of Information Disclosure Statement; in preparation of PTO-1449 form; in compilation of related art; in preparation of transmittal sheet; in filing documents at U.S. Patent and Trademark Office; in updating CaseMaster re: filing of documents; in reporting matter to client.		1.00
MBM	Phone conference with inventors. Revise claims and figures per inventors comments.		1.00
			2.10
	For Current Services Rendered		38.10

Expenses

01/31/2002

Advances

01/30/2002

*** Task Code Not Found

Terms: Balance Due upon Receipt
F.I.N. 52-2386944
Questions? Please call Quiana Reid at (612) 573-0121.
E-mail: greid@dbclaw.com

Exhibit 3

From: "ORMISTON,STEVEN (Non-HP-Boise,ex1)" <steve_ormiston@non.hp.com>
To: Steve Dicke <sdicke@dbclaw.com>
Date: Wed, Feb 13, 2002 2:37 PM
Subject: RE: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve,

Good case. You may want to [REDACTED]

[REDACTED]

[REDACTED] thanks. Steve Ormiston.

Steven R. Ormiston
Outsourcing Manager, Patent Attorney
Hewlett-Packard Co.
Boise, ID
(208) 396-2544
steve_ormiston@non.hp.com

-----Original Message-----

From: Steve Dicke [mailto:sdicke@dbclaw.com]
Sent: Monday, February 04, 2002 3:27 PM
To: steve_ormiston@non.hp.com
Cc: Jolene Neby; Matthew McNutt
Subject: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve:

Attached is a patent application for the HP Invention Disclosure titled "Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM" (HP docket no. 10014277-1; DBC file no. H302.226.101). EP claims and abstract are also attached.

The application has been reviewed and approved by the inventors.

Regards,

Steven E. Dicke

DICKE, BILLIG & CZAJA, P.A.
Intellectual Property Law Attorneys
701 Fourth Ave. South, Suite 1250
Minneapolis, MN 55415

Tel: 612.573.2002
Fax: 612.573.2005
Email: sdicke@dbclaw.com

This electronic mail transmission may contain confidential or privileged information. If you believe that you have received the message in error, please notify the sender by reply transmission and delete the message without copying it or disclosing it.

CC: "Angela Tollerud (E-mail)" <angela_tollerud@non.hp.com>

DICKE, BILLIG & CZAJA, P.A.

**Patent • Trademark • Copyright
ATTORNEYS**

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

April 2, 2002

Ms. Chris Griffin
HEWLETT-PACKARD COMPANY
Legal Department - 314
11307 Chinden Blvd.
Boise, ID 83707-1021

VIA FEDERAL EXPRESS

Re: New U.S. Patent Application for:
MAGNETIC SHIELDING FOR MRAM DEVICES
HP File No.: 10014277-1
DBC File No.: 302.226.101

Dear Chris:

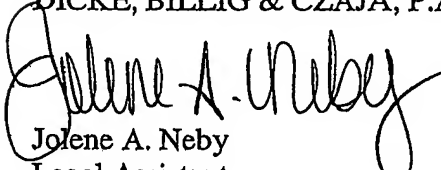
Enclosed are the Declaration and Power of Attorney and Assignment documents for inventor signature for the above-identified application. This application has already been reviewed and approved for filing by the inventor and Steve Ormiston. Please have the inventor execute these documents.

Please return the executed Declaration and Power of Attorney document to my attention via overnight Federal Express. We will then file the application, with formal papers, with the U.S. Patent Office. It is our understanding that you will retain the Assignment document for filing by HP at a later date.

If you have any questions regarding this matter, please feel free to contact me at (612) 573-0439.

Sincerely,

DICKE, BILLIG & CZAJA, P.A.


Jolene A. Neby
Legal Assistant

Enclosures



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Manoj K. Bhattacharyya et al.

Examiner: H. Jey Tsai

Serial No.: 10/735,941

Group Art Unit: 2812

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

DECLARATION OF PRIOR INVENTION UNDER 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Declaration is submitted to establish prior invention of the subject matter of the present patent application. The person making this Declaration is the joint inventor, Sarah Morris Brandenberger.

Accompanying this Declaration are Exhibits A through C to establish conception of the subject matter of the present patent application in the United States prior to the filing date of January 15, 2002, of U.S. Patent Application Pub. No. 2003/0132494 ("Tuttle et al.") coupled with due diligence from prior to the Tuttle et al. filing date to the April 18, 2002 filing date of the parent of the present patent application (i.e., constructive reduction to practice).

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Exhibit A (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Manoj Bhattacharyya, Darrel Bloomquist, and Anthony Holden and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014277 and describes subject matter of the present patent application.

Exhibit B (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Sarah Brandenberger, Darrel Bloomquist, and Manoj Bhattacharyya and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014284 and describes subject matter of the present patent

Declaration under 37 C.F.R. § 1.131
Applicant: Manoj K. Bhattacharyya et al.
Serial No.: 10/735,941
Filed: Dec. 15, 2003
Docket No.: 10014277-2
Title: MAGNETIC SHIELDING FOR MRAM DEVICES

application. The HP Patent Disclosure Nos. 10014277 (Exhibit A) and 10014284 (Exhibit B) were combined for purposes of preparation and filing of the patent application.

Exhibit C (8 pages, including attachments) is the Declaration of Matthew B. McNutt, the patent attorney assigned to prepare the parent of the present application, showing due diligence in preparation of the patent application from prior to the Tuttle et al. January 15, 2002, filing date to the April 18, 2002 filing date of the parent of the present patent application. .

From these exhibits, it can be seen that the subject matter of the present patent application was conceived prior to the filing date of January 15, 2002 of U.S. Patent Application Pub. No. 2003/0132494, coupled with due diligence from prior to the filing date of the reference to the filing date of the parent of the present patent application (i.e., constructive reduction to practice).

As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Sarah Morris Brandenberger Date: 7/14/05
Sarah Morris Brandenberger

Write in Dark Ink on Front Side Only, Please



HP Invention Disclosure

PDNO

10014277

DATE RCVD

2

ATTORNEY

Descriptive Title of Invention:

Permalloy/soft mag. material coating/shielding to protect MRAM from static

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [Mar 22, 91]

(SARAH BRANDENBERGER had a almost identical. Please compare)

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
--------------	------	-----------	--------	----------	-------------------

267954	MANOJ BHATTACHARYA	[Signature]	1-857-7475	Palto 2V-8	0419-5213
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Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
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49084	Darrel Bloomquist	[Signature]			
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Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
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464700	ANTHONY HOLDEN	[Signature]			
--------	----------------	-------------	--	--	--

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date: []

Full Name

Signature

Date of Signature

3

Description of Invention:

A. Description of the construction and operation of the invention (

A coating of soft magnetic material can be applied on top of outside plastic or other material. ^{packaging}

Coating Multiple layers without different orientations easy axes to block fields of different orientations. Can also be added

~~Another~~ An alternate design/implementation can be making the packaging material out of magnetically soft plastic.

B. Advantages of the invention over what has been done before.

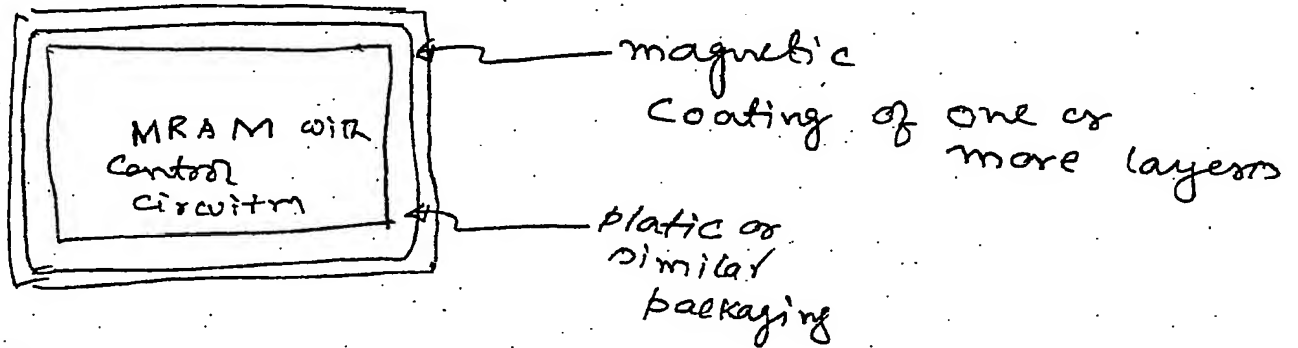
MRAM cells are switched by applying small (of the order of 50-100 Oe) magnetic fields generated by write conductors (word and bit lines). The magnetically written bits are thus sensitive to external fields. ^{Strong} The magnetic fields can be earth magnetic field or any field coming out of a motor or such devices.

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C. Problems solved by the invention.

D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

Pictures/Flowcharts (if any):



or

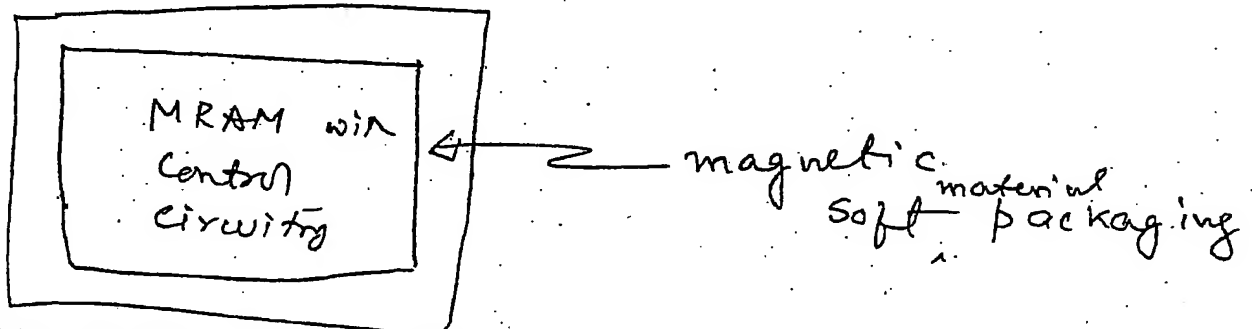


Exhibit B

Combin with 10014277
94

Write in Dark Ink on Front Side Only, Please



HP Invention Disclosure

PDNO

10014284

DATE RCVD

ATTORNEY

Descriptive Title of Invention:

Method of preventing external degradation of MRAM

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [3/21/01]

358135

SARAH Brandenberger

Sarah Brandenberger

x66017 420

PSB

Employee No.

Name

Signature

Telnet

Mailstop

Entity & Lab Name

49084

Darrel Bloomquist

DBloomquist

267954

Manoj Bhattacharyya

Signature

Telnet

Mailstop

Entity & Lab Name

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date: []

Full Name

Steve C. Johnson

Signature

Date of Signature

Description of Invention:

A. Description of the construction and operation of the invention (

provide shielding similar to Faraday cage or solid shield. This can either be on the chip or external packaging.

B. Advantages of the invention over what has been done before.

as far as I know - no shielding has been used on MRAM. This would prevent outside fields from writing. The casing may also have the property of distributing temperature.

Write in Dark Ink on Front Side Only, Please

C. Problems solved by the invention.

prevents external fields "corrupting" Memory

D. Prior solutions and their disadvantages (If available, attach copies of product literature, technical articles, patents, etc.).

Don't know of prior solutions

Pictures/Flowcharts (if any):

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Manoj K. Bhattacharyya et al.	Examiner: H. Jey Tsai
Serial No.: 10/735,941	Group Art Unit: 2812
Filed: Dec. 15, 2003	Docket No.: 10014277-2
Title: <u>MAGNETIC SHIELDING FOR MRAM DEVICES</u>	

DECLARATION OF MATTHEW B. MCNUTT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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I, Matthew B. McNutt, state as follows:

1. I am the patent attorney responsible for preparing the above-referenced patent application (serial no. 10/735,941, filed December 15, 2003, and assigned HP File No. 10014277-2), and also the parent of the above-referenced patent application (serial no. 10/125,095, filed April 18, 2002, and assigned HP File No. 10014277-1).
2. The above-referenced patent application (HP File No. 10014277-2) presents claims that were withdrawn from consideration in the parent patent application (HP File No. 10014277-1) as being directed to a non-elected invention.
3. I have been employed by the law firm of Dicke, Billig & Czaja since 2001.
4. I received invention disclosures (attached as Exhibit A and Exhibit B to the Declarations of Manoj Bhattacharyya, Anthony Holden, and Sarah Brandenberger) for purposes of preparing the parent of the above-referenced patent application on the subject invention of the invention disclosures on or around September 5, 2001 (*see* Exhibit 1, attached).

5. Upon receiving the invention disclosures, they were placed in line to be prepared.
6. During the period between approximately September 5, 2001 and January 15, 2002, the parent of the above-referenced patent application was one of a number of backlogged unrelated cases on which I worked reasonably hard during this period and carried out expeditiously. My practice at the time was to attend to the preparation of patent application cases having bar dates first. I attended to the remaining patent application cases (including the parent of the above-reference patent application) generally in the chronological order in which the patent application cases were received.
7. An invoice issued by Dicke, Billig & Czaja for professional services rendered in preparing the parent of the above-referenced application is attached as Exhibit 2. In the invoice, the initials "MBM" (for "Matthew B. McNutt") are my initials.
8. As indicated on the invoice, I conducted a telephone interview with the inventors to discuss the subject invention of the invention disclosures on January 16, 2002.
9. After I interviewed the inventors on January 16, 2002, and continuing until on or around January 31, 2002, I prepared the parent of the above-referenced patent application.
10. On February 4, 2004, patent attorney Steve Dicke of Dicke, Billig & Czaja emailed to HP Managing Attorney Steven R. Ormiston an inventor-approved draft of the parent of the above-referenced patent application (*see* Exhibit 3, attached).
11. On February 13, 2002, HP Managing Attorney Steven R. Ormiston emailed patent attorney Steve Dicke with comments on the parent of the above-referenced patent application (*see* Exhibit 3, attached).
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Declaration of Matthew B. McNutt

Applicant: Manoj K. Bhattacharyya et al.

Serial No.: 10/735,941

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

13. On April 2, 2002, a Declaration and Power of Attorney and Assignment documents for the parent of the above-referenced patent application were sent to HP Legal Assistant Chris Griffin for obtaining inventor signatures (*see* Exhibit 4, attached).

14. The declaration was executed by the inventors on or around, 2002 (*see* Exhibit 5, attached).

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As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: _____


Matthew B. McNutt

Date: _____

7/13/05

DICKE, BILLIG & CZAJA, P.A.

Patent • Trademark • Copyright
ATTORNEYS

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

Jolene A. Neby
Direct Dial: (612) 573-0439

September 5, 2001

Mr. Matt McNutt
Dicke, Billig, & Czaja, P.A.
4210 Spicewood Springs Road
Suite 104
Austin, TX 78759

RE: New U.S. Patent Application for:
Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM From Stray Field
H-P File No.: 10014277-1
DBC File No.: H302.226.101

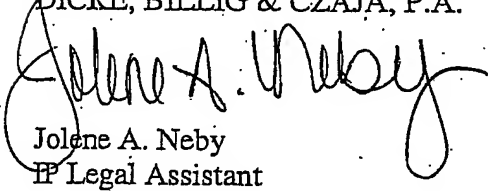
Hi Matt,

Please proceed with preparing a patent application based on the above-referenced file. You may contact the inventors directly for further information you will need in order to prepare this application. The HP primary technical contact is Manoj Bhattacharyya of Palo Alto, California, who can be reached at (650) 857-7475. This application does require a search and the preparation of EP claims and abstract.

If you have any questions regarding this matter or HP procedures, which we may want to touch base on, please contact Steve or me at (612) 573-0439.

Regards,

DICKE, BILLIG & CZAJA, P.A.


Jolene A. Neby
IP Legal Assistant

Enclosures

DICKE, BILLIG & CZAJA, PLLC

Patent • Trademark • Copyright
ATTORNEYSFifth Street Towers • 100 South Fifth Street • Suite 2250 • Minneapolis, Minnesota 55402
Telephone: (612) 573-2000 Facsimile: (612) 573-2005Hewlett-Packard Company
Financial Administrator - PMHP
Legal Dept. M/S 1068
HP Development Co, LP, PO Box 10301
Palo Alto CA 94303-0890
U.S.A.

Attn: Philip Lyren

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

Page: 1

01/31/2002

Account No: 303-216101M

Invoice No: 18109

Fees

Rate Hours

01/16/2002 MBM

Phone interview with inventor. Conduct
prior art search.

1.00

01/17/2002 MBM

Review prior art. Draft claims for
patent application.

2.80

3.80

01/18/2002 MBM

Prepare patent application.

3.90

01/21/2002 MBM

Prepare patent application.

6.50

01/22/2002 MBM

Prepare patent application.

7.80

01/29/2002 MBM

Amend patent application per inventors
comments.

6.10

01/30/2002 MBM

Amend patent application per inventors
comments. Draft additional claims.

2.10

01/31/2002 PAR

Paralegal services in preparation of
Assignment document; in preparation of
Declaration; in forwarding documents for
execution; in reviewing application and
drawings for accuracy; in preparation of
transmittal and calculation of fees; in
filing application and related documents
at U.S. Patent and Trademark Office; in
completion of client checklist; in
updating Request for Quote; in updating
docket dates; in updating CaseMaster re:
filing of documents; in reporting matter

Hewlett-Packard Company

Page: 2

01/31/2002

Account No: 303-216101M

Invoice No: 18109

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

		Rate	Hours
PAR	to client. Paralegal services in preparation of Information Disclosure Statement; in preparation of PTO-1449 form; in compilation of related art; in preparation of transmittal sheet; in filing documents at U.S. Patent and Trademark Office; in updating CaseMaster re: filing of documents; in reporting matter to client.		1.00
MBM	Phone conference with inventors. Revise claims and figures per inventors comments.		1.00
			2.10
	For Current Services Rendered		38.10

Expenses

01/31/2002

Advances

01/30/2002

*** Task Code Not Found

Terms: Balance Due upon Receipt
F.I.N. 52-2386944
Questions? Please call Quiana Reid at (612) 573-0121.
E-mail: qreid@dbclaw.com

Exhibit 3

From: "ORMISTON,STEVEN (Non-HP-Boise,ex1)" <steve_ormiston@non.hp.com>
To: Steve Dicke <sdicke@dbclaw.com>
Date: Wed, Feb 13, 2002 2:37 PM
Subject: RE: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve,

Good case. You may want to [REDACTED]

[REDACTED]

[REDACTED] thanks. Steve Ormiston.

Steven R. Ormiston
Outsourcing Manager, Patent Attorney
Hewlett-Packard Co.
Boise, ID
(208) 396-2544
steve_ormiston@non.hp.com

-----Original Message-----

From: Steve Dicke [mailto:sdicke@dbclaw.com]
Sent: Monday, February 04, 2002 3:27 PM
To: steve_ormiston@non.hp.com
Cc: Jolene Neby; Matthew McNutt
Subject: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve:

Attached is a patent application for the HP Invention Disclosure titled "Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM" (HP docket no. 10014277-1; DBC file no. H302.226.101). EP claims and abstract are also attached.

The application has been reviewed and approved by the inventors.

Regards,

Steven E. Dicke

DICKE, BILLIG & CZAJA, P.A.
Intellectual Property Law Attorneys
701 Fourth Ave. South, Suite 1250
Minneapolis, MN 55415

Tel: 612.573.2002
Fax: 612.573.2005
Email: sdicke@dbclaw.com

This electronic mail transmission may contain confidential or privileged information. If you believe that you have received the message in error, please notify the sender by reply transmission and delete the message without copying it or disclosing it.

CC: "Angela Tollerud (E-mail)" <angela_tollerud@non.hp.com>

DICKE, BILLIG & CZAJA, P.A.

**Patent • Trademark • Copyright
ATTORNEYS**

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

April 2, 2002

Ms. Chris Griffin
HEWLETT-PACKARD COMPANY
Legal Department - 314
11307 Chinden Blvd.
Boise, ID 83707-1021

VIA FEDERAL EXPRESS

Re: New U.S. Patent Application for:
MAGNETIC SHIELDING FOR MRAM DEVICES
HP File No.: 10014277-1
DBC File No.: 302.226.101

Dear Chris:

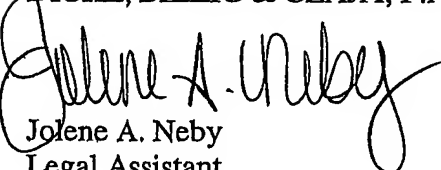
Enclosed are the Declaration and Power of Attorney and Assignment documents for inventor signature for the above-identified application. This application has already been reviewed and approved for filing by the inventor and Steve Ormiston. Please have the inventor execute these documents.

Please return the executed Declaration and Power of Attorney document to my attention via overnight Federal Express. We will then file the application, with formal papers, with the U.S. Patent Office. It is our understanding that you will retain the Assignment document for filing by HP at a later date.

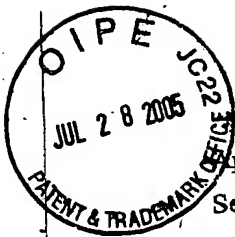
If you have any questions regarding this matter, please feel free to contact me at (612) 573-0439.

Sincerely,

DICKE, BILLIG & CZAJA, P.A.


Jolene A. Neby
Legal Assistant

Enclosures



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Manoj K. Bhattacharyya et al.

Examiner: H. Jey Tsai

Serial No.: 10/735,941

Group Art Unit: 2812

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

DECLARATION OF PRIOR INVENTION UNDER 37 C.F.R. § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Declaration is submitted to establish prior invention of the subject matter of the present patent application. The person making this Declaration is the joint inventor, Manoj K. Bhattacharyya.

Accompanying this Declaration are Exhibits A through C to establish conception of the subject matter of the present patent application in the United States prior to the filing date of January 15, 2002, of U.S. Patent Application Pub. No. 2003/0132494 ("Tuttle et al.") coupled with due diligence from prior to the Tuttle et al. filing date to the April 18, 2002 filing date of the parent of the present patent application (i.e., constructive reduction to practice).

The present application (application no. 10/735,941, filed December 15, 2003, and assigned HP File No. 10014277-2) presents claims that were withdrawn from consideration in the parent application (application no. 10/125,095, filed April 18, 2002, and assigned HP File No. 10014277-1) as being directed to a non-elected invention.

Exhibit A (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Manoj Bhattacharyya, Darrel Bloomquist, and Anthony Holden and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014277 and describes subject matter of the present patent application.

Exhibit B (2 pages) includes a redacted HP Invention Disclosure submitted by the joint inventors Sarah Brandenberger, Darrel Bloomquist, and Manoj Bhattacharyya and received by the HP Legal Department prior to January 15, 2002. In addition, this invention disclosure was witnessed prior to January 15, 2002. This invention disclosure was assigned HP Patent Disclosure No. 10014284 and describes subject matter of the present patent

Declaration under 37 C.F.R. § 1.131
Applicant: Manoj K. Bhattacharyya et al.
Serial No.: 10/735,941
Filed: Dec. 15, 2003
Docket No.: 10014277-2
Title: MAGNETIC SHIELDING FOR MRAM DEVICES

application. The HP Patent Disclosure Nos. 10014277 (Exhibit A) and 10014284 (Exhibit B) were combined for purposes of preparation and filing of the patent application.


Exhibit C (8 pages, including attachments) is the Declaration of Matthew B. McNutt, the patent attorney assigned to prepare the parent of the present application, showing due diligence in preparation of the patent application from prior to the Tuttle et al. January 15, 2002, filing date to the April 18, 2002 filing date of the parent of the present patent application.

From these exhibits, it can be seen that the subject matter of the present patent application was conceived prior to the filing date of January 15, 2002 of U.S. Patent Application Pub. No. 2003/0132494, coupled with due diligence from prior to the filing date of the reference to the filing date of the parent of the present patent application (i.e., constructive reduction to practice).

As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Manoj K. Bhattacharyya Date: 7/14/05
Manoj K. Bhattacharyya

Write in Dark Ink on Front Side Only, Please

	PDNO <u>10014277</u>	DATE RCVD <u>[REDACTED]</u>	ATTORNEY <u>[REDACTED]</u>
---	----------------------	-----------------------------	----------------------------

Descriptive Title of Invention:

Permalloy/soft mag. material coating/shielding to protect MRAM from static

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [Mar 22, 91] 6e

(SARAH BRANDENBERGER has a almost identical. Please compare)

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
267954	MANOJ BHATTACHARYA	<i>[Signature]</i>	1-857-7475	Palto 2V-8	0419-5213
49084	Darrel Bloomquist	<i>[Signature]</i>			

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
464700	ANTHONY HOLDEN	<i>[Signature]</i>			

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date: []

Full Name	Signature	Date of Signature
Steven C. Johnson	<i>[Signature]</i>	[REDACTED] 3

Description of Invention:

A. Description of the construction and operation of the invention (

A coating of soft magnetic material can be applied on top of outside plastic or other packaging material. Multiple layers with different orientations easy axes to block fields of different orientations can also be added.

An alternate design/implementation can be making the packaging material out of magnetically soft plastic.

B. Advantages of the invention over what has been done before.

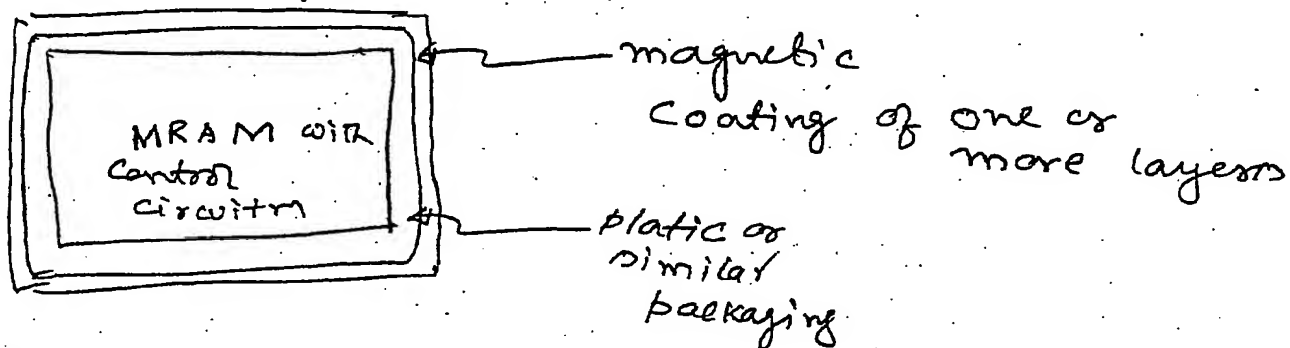
MRAM cells are switched by applying small (of the order of 50-100 Oe) magnetic fields generated by write conductors (word and bit lines). The magnetically written bits are thus sensitive to external fields. The magnetic fields can be earth magnetic field or any field coming out of a motor or such devices.

Write in Dark Ink on Front Side Only, Please

C. Problems solved by the invention.

D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

Pictures/Flowcharts (if any):



or

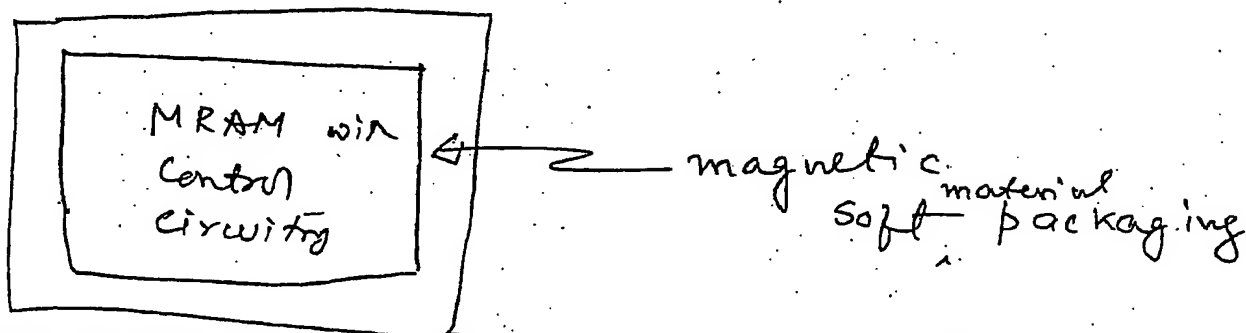


Exhibit B

Combin with 10014277
84

Write in Dark Ink on Front Side Only, Please



HP Invention Disclosure

PDNO

10014284

DATE RCVD

ATTORNEY

Descriptive Title of Invention:

Method of preventing external degradation of MRAM

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: 3/21/01

356135	SARAH Brandhuberger	Sarah Brandhuberger	x66017	420	PSB
Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
49084	Darrel Bloomquist	DBloomquist			
267954	Manoj Bhattacharyya	manojbhat			
Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name

Signature of Witness(es) The invention was first explained to, and understood by, me (us) on this date:

Full Name

Signature

Date of Signature

Steve C. Johnson

Description of Invention:

A. Description of the construction and operation of the invention (

provide shielding similar to Faraday cage or solid shield more shielded

This can either be on the chip or external packaging.

B. Advantages of the invention over what has been done before.

as far as I know - no shielding has been used on MRAM. This would ~~also~~ prevent outside fields from writing. The casing may also have the property of distributing temperature.

Write in Dark Ink on Front Side Only, Please

C. Problems solved by the invention.

prevents external fields "corrupting" Mram

D. Prior solutions and their disadvantages (If available, attach copies of product literature, technical articles, patents, etc.).

Don't know of prior solutions

Pictures/Flowcharts (if any):

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Manoj K. Bhattacharyya et al.	Examiner:	H. Jey Tsai
Serial No.:	10/735,941	Group Art Unit:	2812
Filed:	Dec. 15, 2003	Docket No.:	10014277-2
Title:	MAGNETIC SHIELDING FOR MRAM DEVICES		

DECLARATION OF MATTHEW B. MCNUTT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Declaration is submitted in support of Declarations of Prior Invention Under 37 C.F.R. 1.131 submitted by joint inventors of the above-referenced patent application. This Declaration is submitted to establish due diligence in the preparation and filing of the parent of the above-referenced patent application in the United States from prior to the filing date of January 15, 2002, of U.S. Patent Application Pub. No. 2003/0132494 ("Tuttle et al.") to the April 18, 2002 filing date of the parent of the above-referenced patent application (i.e., constructive reduction to practice).

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Declaration of Matthew B. McNutt

Applicant: Manoj K. Bhattacharyya et al.

Serial No.: 10/735,941

Filed: Dec. 15, 2003

Docket No.: 10014277-2

Title: MAGNETIC SHIELDING FOR MRAM DEVICES

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Name:


Matthew B. McNutt

Date:

7/13/05

DICKE, BILLIG & CZAJA, P.A.

Patent • Trademark • Copyright
ATTORNEYS

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

Jolene A. Neby
Direct Dial: (612) 573-0439

September 5, 2001

Mr. Matt McNutt
Dicke, Billig, & Czaja, P.A.
4210 Spicewood Springs Road
Suite 104
Austin, TX 78759

RE: New U.S. Patent Application for:
Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM From Stray Field
H-P File No.: 10014277-1
DBC File No.: H302.226.101

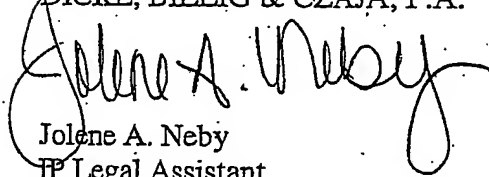
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Regards,

DICKE, BILLIG & CZAJA, P.A.



Jolene A. Neby
IP Legal Assistant

Enclosures

DICKE, BILLIG & CZAJA, PLLC

Patent • Trademark • Copyright
ATTORNEYSFifth Street Towers • 100 South Fifth Street • Suite 2250 • Minneapolis, Minnesota 55402
Telephone: (612) 573-2000 Facsimile: (612) 573-2005Hewlett-Packard Company
Financial Administrator - PMHP
Legal Dept. M/S 1068
HP Development Co, LP, PO Box 10301
Palo Alto CA 94303-0890
U.S.A.

Attn: Philip Lyren

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

Page: 1

01/31/2002

Account No: 303-216101M

Invoice No: 18109

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Rate Hours

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6.50

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7.80

01/29/2002 MBM

Amend patent application per inventors comments.

6.10

01/30/2002 MBM

Amend patent application per inventors comments. Draft additional claims.

2.10

01/31/2002 PAR

Paralegal services in preparation of Assignment document; in preparation of Declaration; in forwarding documents for execution; in reviewing application and drawings for accuracy; in preparation of transmittal and calculation of fees; in filing application and related documents at U.S. Patent and Trademark Office; in completion of client checklist; in updating Request for Quote; in updating docket dates; in updating CaseMaster re: filing of documents; in reporting matter

Hewlett-Packard Company

MAGNETIC SHIELDING FOR MRAM DEVICES
10014277-1

Page: 2
01/31/2002
Account No: 303-216101M
Invoice No: 18109

		Rate	Hours
PAR	to client. Paralegal services in preparation of Information Disclosure Statement; in preparation of PTO-1449 form; in compilation of related art; in preparation of transmittal sheet; in filing documents at U.S. Patent and Trademark Office; in updating CaseMaster re: filing of documents; in reporting matter to client.		1.00
MBM	Phone conference with inventors. Revise claims and figures per inventors comments.		1.00
			2.10
	For Current Services Rendered		38.10

Expenses

01/31/2002

Advances

01/30/2002

*** Task Code Not Found

Terms: Balance Due upon Receipt
F.I.N. 52-2386944
Questions? Please call Quiana Reid at (612) 573-0121.
E-mail: qreid@dbclaw.com

Exhibit 3

From: "ORMISTON,STEVEN (Non-HP-Boise,ex1)" <steve_ormiston@non.hp.com>
To: Steve Dicke <sdicke@dbclaw.com>
Date: Wed, Feb 13, 2002 2:37 PM
Subject: RE: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve,

Good case. You may want to [REDACTED]

[REDACTED]

[REDACTED] thanks. Steve Ormiston.

Steven R. Ormiston
Outsourcing Manager, Patent Attorney
Hewlett-Packard Co.
Boise, ID
(208) 396-2544
steve_ormiston@non.hp.com

-----Original Message-----

From: Steve Dicke [mailto:sdicke@dbclaw.com]
Sent: Monday, February 04, 2002 3:27 PM
To: steve_ormiston@non.hp.com
Cc: Jolene Neby; Matthew McNutt
Subject: HP docket no. 10014277-1; DBC file no. H302.226.101

Steve:

Attached is a patent application for the HP Invention Disclosure titled "Permalloy/Soft Magnetic Material Coating/Shielding to Protect MRAM" (HP docket no. 10014277-1; DBC file no. H302.226.101). EP claims and abstract are also attached.

The application has been reviewed and approved by the inventors.

Regards,

Steven E. Dicke

DICKE, BILLIG & CZAJA, P.A.
Intellectual Property Law Attorneys
701 Fourth Ave. South, Suite 1250
Minneapolis, MN 55415

Tel: 612.573.2002
Fax: 612.573.2005
Email: sdicke@dbclaw.com

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CC: "Angela Tollerud (E-mail)" <angela_tollerud@non.hp.com>

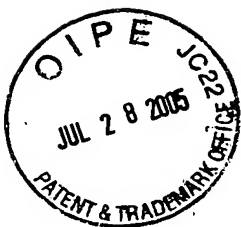


Exhibit 4

DICKE, BILLIG & CZAJA, P.A.

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ATTORNEYS

Suite 1250 • 701 Building • 701 Fourth Avenue South • Minneapolis, Minnesota 55415
Telephone: (612) 573-2000 Facsimile: (612) 573-2005

April 2, 2002

Ms. Chris Griffin
HEWLETT-PACKARD COMPANY
Legal Department - 314
11307 Chinden Blvd.
Boise, ID 83707-1021

VIA FEDERAL EXPRESS

Re: New U.S. Patent Application for:
MAGNETIC SHIELDING FOR MRAM DEVICES
HP File No.: 10014277-1
DBC File No.: 302.226.101

Dear Chris:

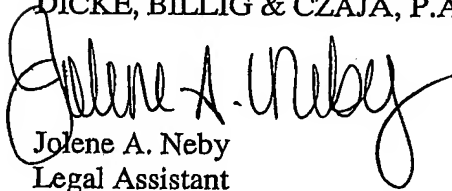
Enclosed are the Declaration and Power of Attorney and Assignment documents for inventor signature for the above-identified application. This application has already been reviewed and approved for filing by the inventor and Steve Ormiston. Please have the inventor execute these documents.

Please return the executed Declaration and Power of Attorney document to my attention via overnight Federal Express. We will then file the application, with formal papers, with the U.S. Patent Office. It is our understanding that you will retain the Assignment document for filing by HP at a later date.

If you have any questions regarding this matter, please feel free to contact me at (612) 573-0439.

Sincerely,

DICKE, BILLIG & CZAJA, P.A.


Jolene A. Neby
Legal Assistant

Enclosures

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